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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGHIEM, MICHAEL P

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/844,665

Applicant(s)

YUN, SEUK-JIN

Examiner

Michael P Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-18 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 19-27 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application):
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The Amendment filed on January 24, 2003 has been acknowledged.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 26, "... said second and third contact portions not being relay contacts" was not disclosed in the original specification. The original specification described the contacts (126, 132) as being used to **relay** or transmit signals from the printed circuit board (124) to the ink cartridge (10) (paragraph 25).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-4, 19-25, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Abe et al. (US 6,151,046).

Abe et al. discloses all the claimed features of the invention including:

- an electrical contacting apparatus (Figs. 13) in an ink jet printer, for contacting respective ones of a plurality of electrically conductive first contact portions of an ink cartridge (column 9, lines 53-56) with corresponding ones of a plurality of electrically conductive second contact portions (4508) of a printed circuit board (4507) installed on a carrier (4530), in order to electrically connect the ink cartridge to said printed circuit board (Fig. 7), said ink cartridge being configured to be mounted on said carrier (Fig. 7), said apparatus comprising:

- a plurality of electrically conductive spring elastic members (Fig. 15), each one of said plurality of a electrically conductive spring elastic members (column 12, lines 3-14) on said printed circuit board (Fig. 10) comprising:

- a third contact portion (4514, Fig. 9) that forms electrical contact with a corresponding one of said plurality of said first contact portions of said ink cartridge (column 9, lines 53-56);

- a base (base 4513 including 4515) having one end (4515) electrically connected to a corresponding one of said plurality of second contact portions (Fig. 8);

- a connection portion (bent between 4513 and 4514) electrically and physically connecting said third contact portion to said base (Fig. 15), said connection portion providing an elastic restoration force between said third contact portion and said base (column 12, lines 3-14, elastic restoration force at bent will oppose any pushing force on 4514), each one of said plurality of spring elastic members being formed from an integral elongated member having a bent portion (Fig. 15), said bent portion forming said connection portion (Fig. 15);

- a housing (4506) for receiving said plurality of spring elastic members and maintaining said elastic force between each one of a plurality of third contact portions and a corresponding one of a plurality of bases for each spring elastic member (Fig. 15);

- said housing having a plurality of spaces (spaces receiving contact portions, Fig. 14) for receiving respective ones of said plurality of spring elastic members and providing electrical and physical isolation between adjacent spring elastic members (Fig. 14), said housing comprising a plurality of windows (openings in 4506 allowing 4501 through, Fig. 15) exposing respective ones of said plurality of spring elastic members to the outside (Fig. 15);

- one end of each one of a plurality of bases being electrically connected to the printed circuit board by solder to form one of said plurality of second contacts (column 11, lines 5-8);

- said bent portion comprising only a single bend in each one of said plurality of elastic members, said bend providing all of said restoration force of each one of said plurality of elastic members (Fig. 15);

- each one of said plurality of elastic members being absent of a coil spring, said elastic member being absent a rigid conductive member (Fig. 15);

- said printed circuit board not being part of said ink cartridge (4507 not part of ink jet cartridge, Fig. 7, but only attached to 4506, Fig. 8);

- said third contact portion being at a first point (4514) on each of said electrically conductive spring elastic members (Fig. 15), said base being at a second point (4513) on each of said electrically conductive spring elastic members, said bent connection (bent between 4513, 4514) portion being disposed on each electrically conductive spring elastic member between said first point and said second point (Fig. 15);

- said bent connection portion being separate and different from said third contact portion (Fig. 15);

- said third contact portion being a second bent portion (bent at 4514) on each of said electrically conductive spring elastic members (Fig. 15);

- said printed circuit board not serving to enclose said ink cartridge (4507 attaches to 4506 which encloses the ink jet cartridge, Figs. 7, 8);

- said elastic restoration force serving to push said third contact portion into stable and reliable physical and electrical contact with said first contact portion of said ink cartridge when said ink cartridge is mounted on said carrier (when 4514 is pushed during contact, elastic force at first bent will oppose pushing force, Fig. 15).

Response to Amendment

3. The amendment filed on January 24, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Claim 26, "... said second and third contact portions not being relay contacts" was not described in the original disclosure. The original specification described the contacts (126, 132) as being used to relay or transmit signals from the printed circuit board (124) to the ink cartridge (10) (paragraph 25).

Applicant is required to cancel the new matter in the reply to this Office Action.

Allowable Subject Matter

4. Claim 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 8-18 are allowed.

Reasons For Allowance

6. The combination and method as claimed wherein each one of said plurality of spring elastic members being formed of phosphor bronze plated with nickel, and each one of said plurality of third contact portions being further plated with gold (claims 5, 16) or a printed circuit board (PCB) disposed on a back side of said carrier and a housing disposed on said PCB, said housing facing a front side of said carrier (claim 8) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

7. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Michael Nghiem', with a stylized flourish at the end.

MICHAEL NGHIEM
PRIMARY EXAMINER
Michael Nghiem

March 25, 2003